Chemical pollution introduces chemicals into the natural environment, negatively **affecting** the air, water and **soil**. Such pollutants can come from **a wide** variety of sources. When chemical pollutants are **concentrated** or in an area for period, they can **adversely** affect the ecosystem and those who live in the area

Short-Term Effects on the Environment

When a chemical pollutant **enters** a body of water, it can impact **surrounding** wildlife, **watershed** and residents. For example, if chemicals get into to a **freshwater** supply that people and/or animals **rely on** for drinking, it may no longer be safe for **consumption** or sanitation purposes. Toxic releases from industrial plants into the environment and agricultural **runoff** can threaten water supplies in the short term.

**Long-Term Effects on the Environment**

**Fertilizers** or **sewage** can **introduce** chemicals **containing** nitrate or **phosphate** into **bodies** of water. Nitrate and **phosphate** are food for the **algae** in water. An **overload** of these chemicals will cause the **algae** to **bloom**. As the **excess** algae die and **decay**, **dissolved** oxygen is used up and the **overall** quality of the water is **degraded**. **Aquatic** life **dies** from oxygen **deprivation**. When **emissions** from industrial plants like **sulfur** and **nitrogen** oxides enter the **atmosphere**, they can produce **acid** **rain**. **Acid** **rain** can **weaken** plant life, **stress** marine animals and cause the soil to **leach** toxic metals. In some cases, chemical pollution can **kill** populations of **beneficial** **species** that support ecosystems, like bees. When long-term **exposure** to chemical pollutants cause native species **within** an ecosystem to die, the area **experiences** a loss of **diversity** and becomes more **vulnerable** to **invasive** and **undesirable** species.

**Global Warming**

The **class** of chemical pollutants called **greenhouse** gases may **contribute** to global **warming**. **Greenhouse** gases released **as a result** of human activities include carbon dioxide, **methane**, **nitrous oxide** and **fluorinated** **gases**. Methane and **nitrous** oxide are **released** mostly **through agricultural** activities. The **burning** of fossil **fuels** and **deforestation** release carbon dioxide. Many industrial processes release **fluorinated** gases. The effects of global warming include **accelerated** ice **melt** at the **Earth's** poles, **rising** sea levels, and **loss** of **species** who are unable to **adapt**.

**Effects on Health**

Chemical pollution can **affect** animals -- including **humans** -- when **ingested**, **breathed** in or **absorbed** through the **skin**. Short-term **exposure** to some chemical pollutants can **impair** the **immune**, **endocrine** and **reproductive** systems. **Pollutants** may cause **lesions**, **alter liver** function or **darken** the skin. Chemical pollutants may also **trigger** **asthma** symptoms in those **diagnosed** with the **disease**. Exposure to chemical pollution can also **lead** to **headaches**, upper **respiratory** infections, **dizziness** and **nose**, **throat** or eye **irritations**. According to the World Health Organization, developing **fetuses** are among the most **sensitive** to some types of chemical pollution, as the **toxins** can **affect** the **development** of organ systems and **growth**.